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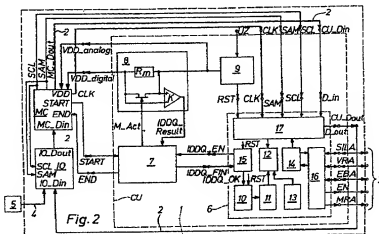
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(54) Title: **CONTROL DEVICE FOR CONTROLLING APPLICATIONS WHICH ARE CRUCIAL TO SAFETY**

(54) Bezeichnung: **STEUERGERÄT ZUR STEUERUNG SICHERHEITSKRITISCHER ANWENDUNGEN**

(57) Abstract

The invention relates to a control device (1) for controlling applications (5) which are crucial to safety. The inventive control device comprises a microcomputer (MC), a monitoring unit (CU, Check Unit) and peripheral circuits (IO, Input/Output). The aim of the invention is to further improve the reliability of error detection in control devices of this type and to broaden the detection of additional types of errors. To this end, the invention provides a control device (1) of the aforementioned type, whereby the monitoring unit (CU) comprises first means for measuring the quiescent current of the microcomputer (MC). At least one quiescent handshake line (IDDQ-HDSHK) which is provided for controlling the measurement of the quiescent extends between the first means of the CU and the MC. In addition, the CU comprises second means for subjecting the MC to a test data input signal, for processing the test data input signal and for comparing the corresponding test data output signal of the MC with the corresponding test data output signal of the CU. At least one test data signal transmission line extends between the second means of the CU and the MC.



Abstract

The present invention relates to a control unit (1) for controlling safety-critical applications (5), having a microcomputer (MC), a monitoring unit (CU, check unit), and peripheral circuits (IO, input/output). To further improve the reliability of the error detection for such control units, and to expand the detection to additional error types, a control unit (1) of the indicated type is proposed in accordance with the present invention, the monitoring unit (CU) having first means for measuring the quiescent current of the microcomputer (MC); at least one quiescent current handshake line (IDDQ-HDSHK) for controlling the measurement of the quiescent current running between the first means of the CU and the MC; the CU having second means for applying a test data input signal to the MC, for processing the test data input signal, and for comparing the corresponding test data output signal of the MC to the corresponding test data output signal of the CU; and at least one test data signal transmission line running between the second means of the CU and the MC.

(Figure 2)